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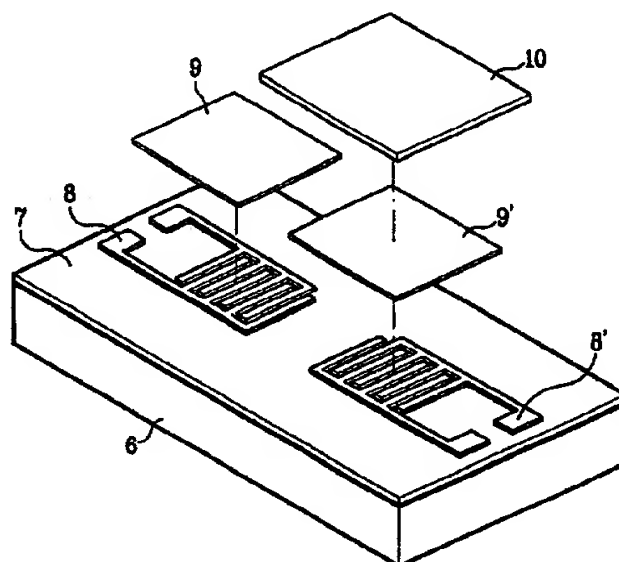
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(54) Title: ABSOLUTE HUMIDITY SENSOR



(57) Abstract: An absolute humidity sensor for a microwave oven is disclosed. The absolute humidity sensor includes a silicon substrate, a humidity sensing element formed on a substrate, for detecting humidity exposed to the air, having a variable resistance value depending on the amount of the humidity, a temperature compensating element formed on the semiconductor, for compensating for the resistance value of the humidity sensing element, and a passivation film covered on the temperature compensating element, for shielding the humidity exposed to the air so as not to vary the resistance value of the temperature compensating element. The humidity sensing element and the temperature compensating element include an insulating film formed on the substrate, a humidity sensing film formed on the insulating film, for absorbing the humidity, and an electrode formed below the humidity sensing film or over/below the humidity sensing film. A polyimide thin film, which absorbs the humidity greater than a ceramic based humidity sensing material, is used as a humidity sensing material, and a silicon wafer is used as a substrate. Thus, an absolute humidity sensor susceptible to humidity can be fabricated and at the same time the sensor is integrated using a silicon process to facilitate its mass production.

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